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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/828,296

08/27/2004

Hung Meng Yi

26109

4384

20529

7590

03/13/2007

NATH & ASSOCIATES

112 South West Street

Alexandria, VA 22314

EXAMINER

CHEN, WEN YING PATTY

ART UNIT

PAPER NUMBER

2871

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/13/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/828,296

Applicant(s)

YI, HUNG MENG

Examiner

W. Patty Chen

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 3,5,9,12,17 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6,8,10,11,13,15,16,18,19 and 21 is/are rejected.
- 7) ☒ Claim(s) 7,14 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/21/04,8/27/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of Group I A, Group II A and Group III A in the reply filed on Jul. 21, 2006 is acknowledged. The traversal is on the ground(s) that since the independent claims 1, 8 and 15 of which the species depend from are generic claims; therefore, all claims are generic. This is not found persuasive because although the independent claims are generic, however, this does not prevent the depending claims to present different embodiments of the claimed invention. Therefore, since some of the claims are directed to patentably distinct species, thus, the election of species requirement is maintained.

The requirement is still deemed proper and is therefore made FINAL.

### ***Response to Amendment***

Applicant's Amendment filed on Jul. 21, 2006 has been entered. The amended claim 18 now reads on the elected species. Therefore, claims 1-21 remain pending in the current application, however, claims 3, 5, 9, 12, 17 and 19 are withdrawn from consideration.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 4, 6, 8, 11, 13, 15, 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (Admission) in view of Yang et al. (US 6982793).

With respect to claims 1, 8 and 15: Admission discloses in Figures 1 and 2 a liquid crystal display panel with marks for checking breaking accuracy by visual inspection, comprising:

a first transparent substrate (element 3) having a plurality of array units (Page 1 of Spec, lines 19-24) and a plurality of first marks (element 23) formed thereon, each of the array units corresponding to a display area, and each boundary of the array unit having a cutting line (element 22), and each pair of the adjacent cutting lines intersecting with each other (as shown in Figure 2), and each of the first marks formed on the intersection of the adjacent cutting lines (as shown in Figure 2);

a second transparent substrate (element 4) having a plurality of color filter units (Page 1 of Spec, lines 19-24) and a plurality of second marks (element 23) formed thereon, each of the color filter unit corresponding to one of the array unit, each boundary of the color filter unit having a cutting line (element 22), and each pair of the adjacent cutting lines intersecting with

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each other, each of the second marks formed on the intersection of the adjacent cutting lines (as shown in Figure 2), the second transparent substrate being stacked over the first transparent substrate and a space contained therebetween (as shown in Figure 1);

a liquid crystal material (element 6) filled in the space between each pair of the array unit and the color filter unit, and a light traveling through the liquid crystal material capable of being controlled by an applied voltage (Page 2 of Spec, lines 16-24); and

a plurality of sealing elements (element 5) disposed between the array units and the color filter units to seal the liquid crystal material.

Admission failed to disclose that the first and second marks are checkerboard marks having a pair of first-square marks in a diagonal relationship and a pair of second-square marks in a diagonal relationship.

However, Yang et al. disclose in Figure 25B of forming alignment marks in a checkerboard configuration, having a pair of first-square marks in a diagonal relationship and a pair of second-square marks in a diagonal relationship.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a liquid crystal display panel as discussed in the Admission wherein the alignment marks are configured as checkerboard marks as taught by Yang et al., since Yang et al. teach that such alignment marks are advantageous for calculating and detecting alignment errors, since the marks are extremely sensitive to any misalignments (Column 1, line 60 through Column 2, line 13).

As to claims 4, 11 and 18 (Amended): Admission discloses in Figure 2 that a pattern (element 23) is formed on the intersection of the adjacent cutting lines (element 22).

As to claims 6, 13 and 21: Yang et al. further disclose in Figure 25B that the first-square mark has a first pattern and the second-square mark has a second pattern.

Claims 2, 9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (Admission) and Yang et al. (US 6982793) in view of Lee et al. (US 2004/0263768).

Admission and Yang et al. disclose all of the limitations set forth in the previous claims, but failed to specifically disclose that the transparent substrates in which the array units and the color filter units are disposed on are distant from each other.

However, Lee et al. disclose in Figures 3-5 that the transparent substrates can be distant or adjacent to each other.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a liquid crystal display as discussed in the Admission and taught by Yang et al. wherein the transparent substrates are distant or adjacent to each other as taught by Lee et al., since Lee et al. teach that different arrangements of the transparent substrates allows efficient arrangement of the LCD panels so that the substrate space can be utilized more efficiently (Paragraphs 0013-0016).

#### ***Allowable Subject Matter***

Claims 7, 14 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The following is a statement of reasons for the indication of allowable subject matter:

Although the closest prior art Yoshino (JP2001-013485) discloses using color elements as alignment marks, however, none of the prior arts either alone or in combination fairly teach or suggest that the alignment mark is a checkerboard mark wherein the first-square mark has a first color base and the second-square mark has a second color base.

Therefore, claims 7, 14 and 20 are deemed non-obvious and inventive over the prior arts, therefore, are indicated allowable.

#### ***Relevant Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yoshino (JP2001-013485); Tajima (JP05-346562); and Holscher et al. (US 2004/0032031).

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to W. Patty Chen whose telephone number is (571)272-8444. The examiner can normally be reached on 8:00-5:00 M-F.

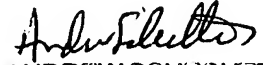
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571)272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

W. Patty Chen  
Examiner  
Art Unit 2871

WPC  
3/04/07

  
ANDREW SCHMITT  
PRIMARY EXAMINER